ential or non-helical in character, in which case it might be advisable to arrange the grooves of adjacent rollers in staggered relation. Or, if desired, the helical formation of the grooves could be still more accentuated as indicated by the grooves J' in Fig. 4. Again if desired the cavities could be in the form of circular or other depressions as J'' in Fig. 5. Or, as indicated at L in Fig. 6, the cavities could be spaces formed between projections in the surface of the roller. Many other forms will naturally suggest themselves to those skilled in the art.

The operation of the device will be obvious from the foregoing explanation, and it remains only to be said that it is not intended that all of the rollers 3 must necessarily be equipped with the cavities.

I claim:

1. In a paper making machine: a traveling screen to carry an aqueous solution from which paper is to be made; and a rotatable supporting element, associated with said screen, the supporting surface of which is provided with shallow cavities such that capillary attraction is set up between the screen and the surfaces of the cavities to thereby draw water into said cavities, and said cavities being of such area that, without substantially diminishing the supporting function of said element, the rotation of such element causes the water to be discharged from said cavities.

2. In a paper making machine: a traveling screen to carry an aqueous solution from which paper is to be made; and a plurality of rotatable supporting elements, associated with said screen, the supporting surfaces of which are provided with shallow cavities such that capillary attraction is set up between the screen and the surfaces of the cavities to thereby draw water into said cavities, the depth of the cavities in the different supporting elements varying and being less in those supporting elements that are near the output end of the screen than in those supporting elements that are near the intake end of the screen, and said cavities being of such area that, without substantially diminishing the supporting function of said elements, the rotation of such elements causes the water to be discharged from said cavities.

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